

# V&V Reference Report

## L2 ASCDS Version : 8.3.2.1

Observation 62520 - L2 Version 4  
Chandra X-Ray Center

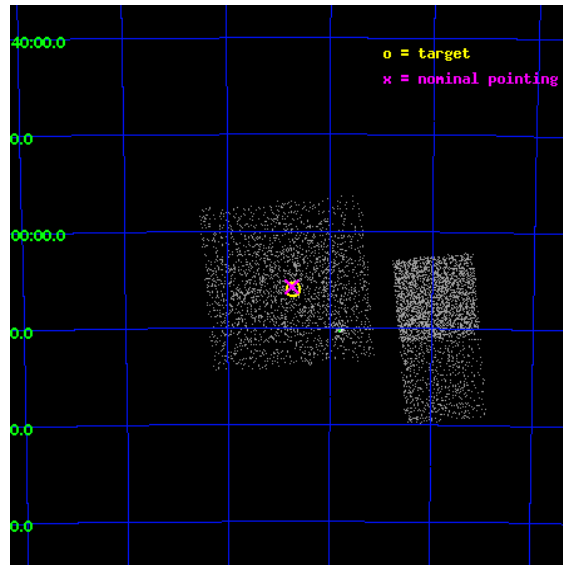
L2 Processing Date : Sep 28 2010

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# 1 Front

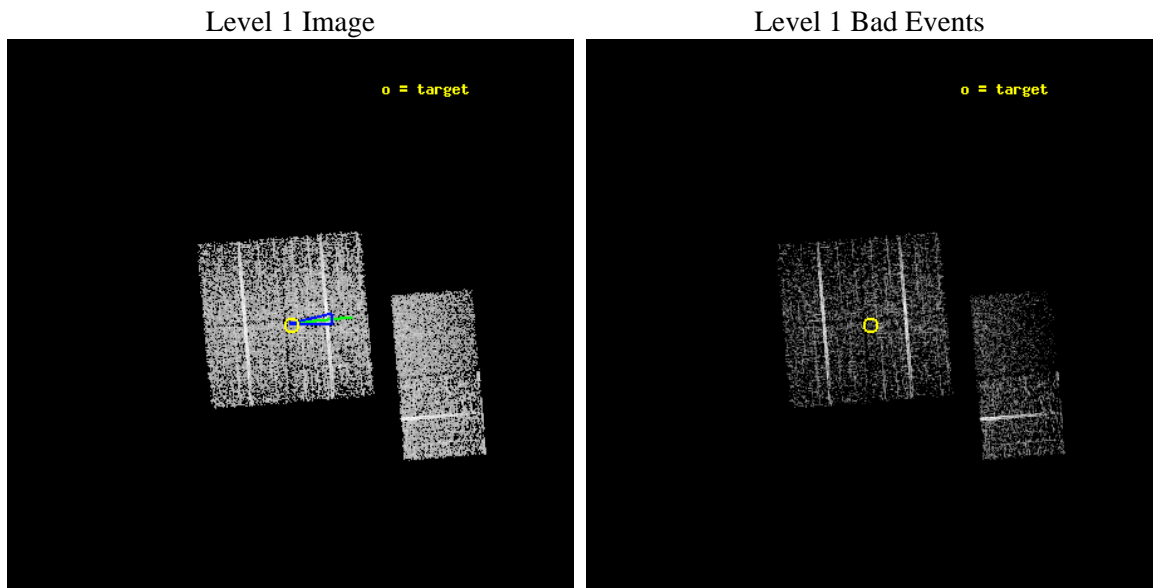
seq_num	200070	Sequence number
obs_id	62520	Observation id
title	ACIS OBSERVATION OF 30 DORADUS	Proposal title
observer	Prof. Gordon Garmire	Principal investigator
object	30 DORADUS	Source name
dtcycle	0	&#160
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	84.678542	Observer's specified target RA
dec_targ	-69.100833	Observer's specified target Dec
ra_nom	84.685874713265	Nominal RA
dec_nom	-69.096064308518	Nominal Dec
roll_nom	85.215539063153	Nominal Roll
revision	4	Processing version of data
ontime	2430.1534338668	Sum of GTIs [s]
livetime	207.62497441448	Livetime [s]
ontime0	2426.5403890386	Sum of GTIs [s]
ontime1	2423.0700690374	Sum of GTIs [s]
ontime2	2409.0656690523	Sum of GTIs [s]
ontime3	2430.1534338668	Sum of GTIs [s]
ontime7	2479.1697489917	Sum of GTIs [s]
ontime8	2416.1079639494	Sum of GTIs [s]
l2events	6312	Number of level 2 events



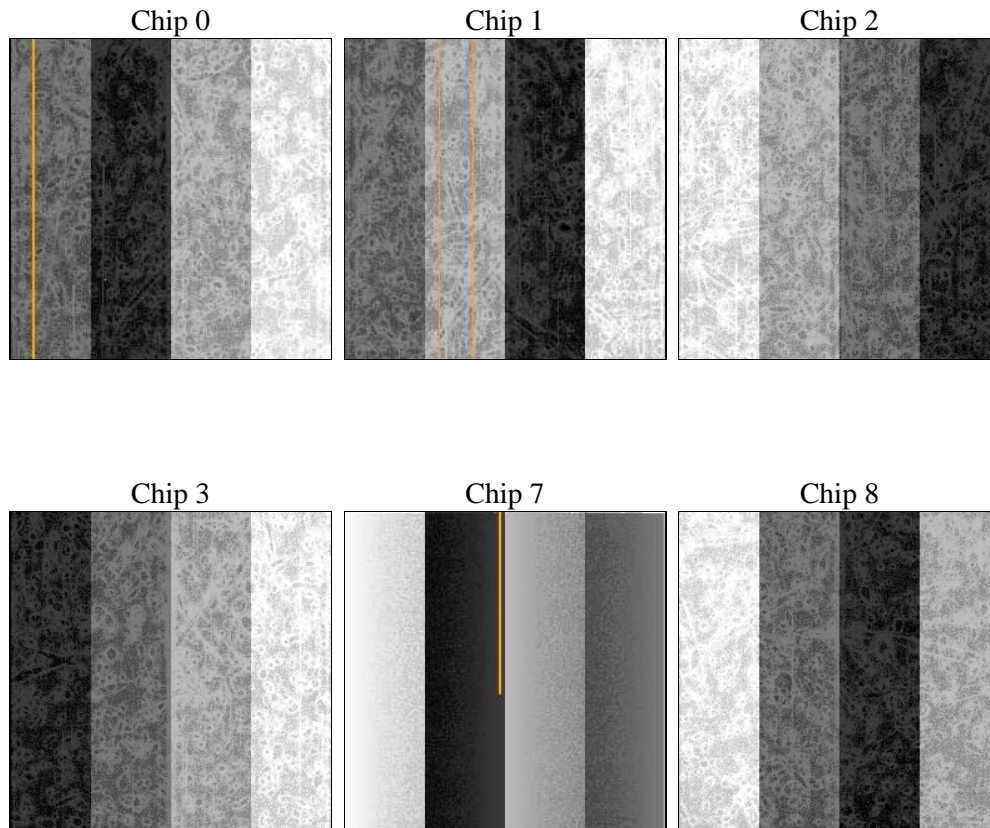
## 2 OBI Primary

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27840.000000	Scheduled observation exposure time
ascdsver	8.3.2.1	ASCDS version number	ontime	2430.1534338668	Sum of GTIs [s]
caldbver	4.3.1	&#160	ontime0	2426.5403890386	Sum of GTIs [s]
date	2010-09-28T09:20:27	Date and time of file creation	ontime1	2423.0700690374	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	2409.0656690523	Sum of GTIs [s]
			ontime3	2430.1534338668	Sum of GTIs [s]
			ontime7	2479.1697489917	Sum of GTIs [s]
			ontime8	2416.1079639494	Sum of GTIs [s]
			l1events	71608	Number of level 1 events

### 2.1.4 Events

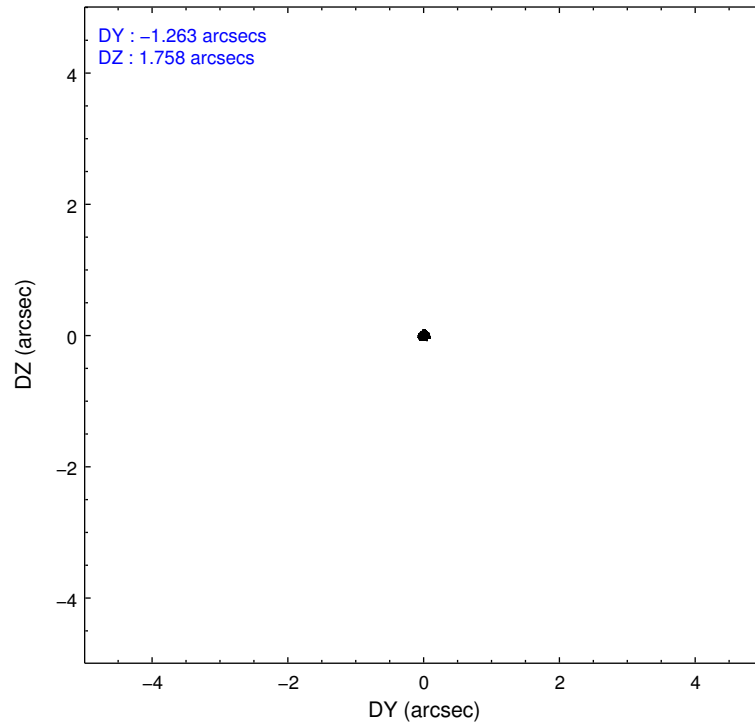
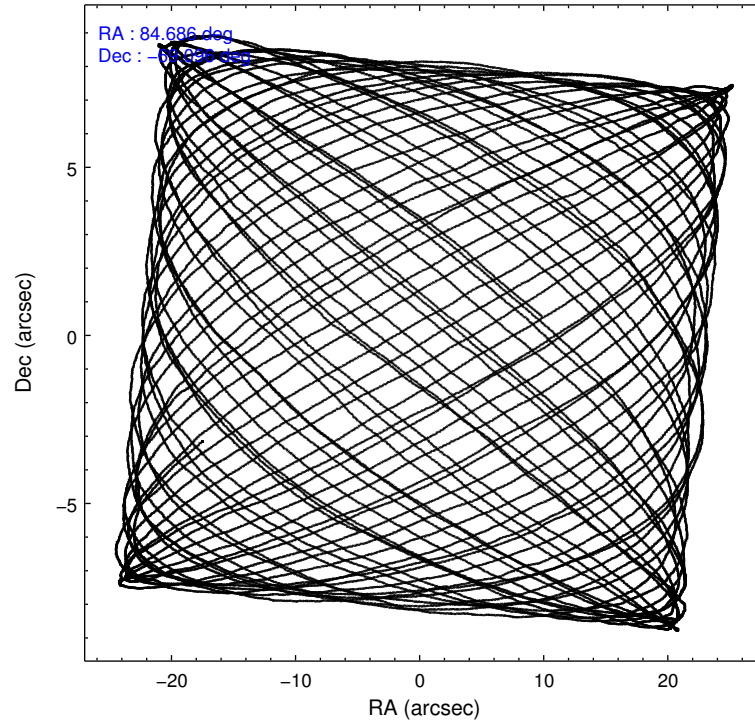
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7	ccd 8
level 1 events	11089	11790	12776	12770	9426	13757
rejected events	10252	10851	11951	11745	6555	12445
rejected %	92%	92%	93%	91%	69%	90%

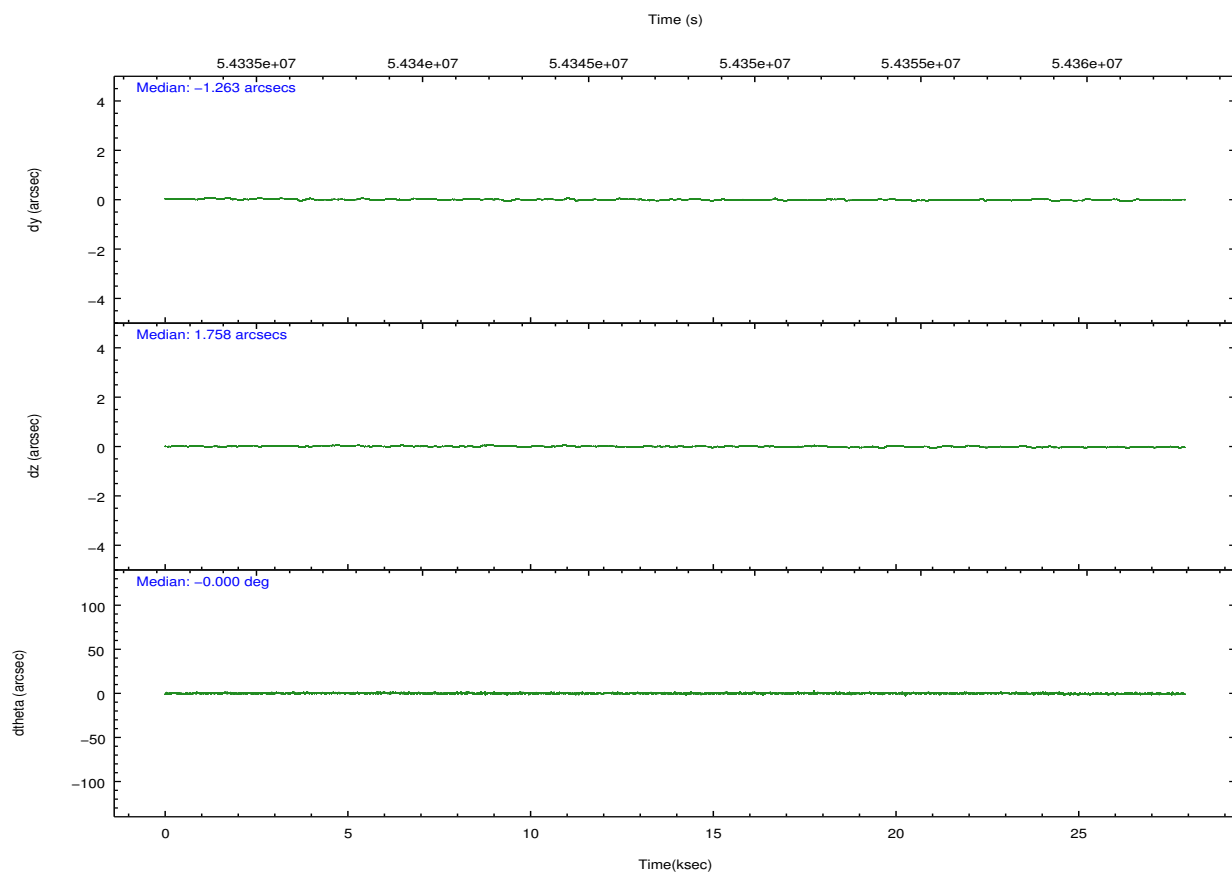
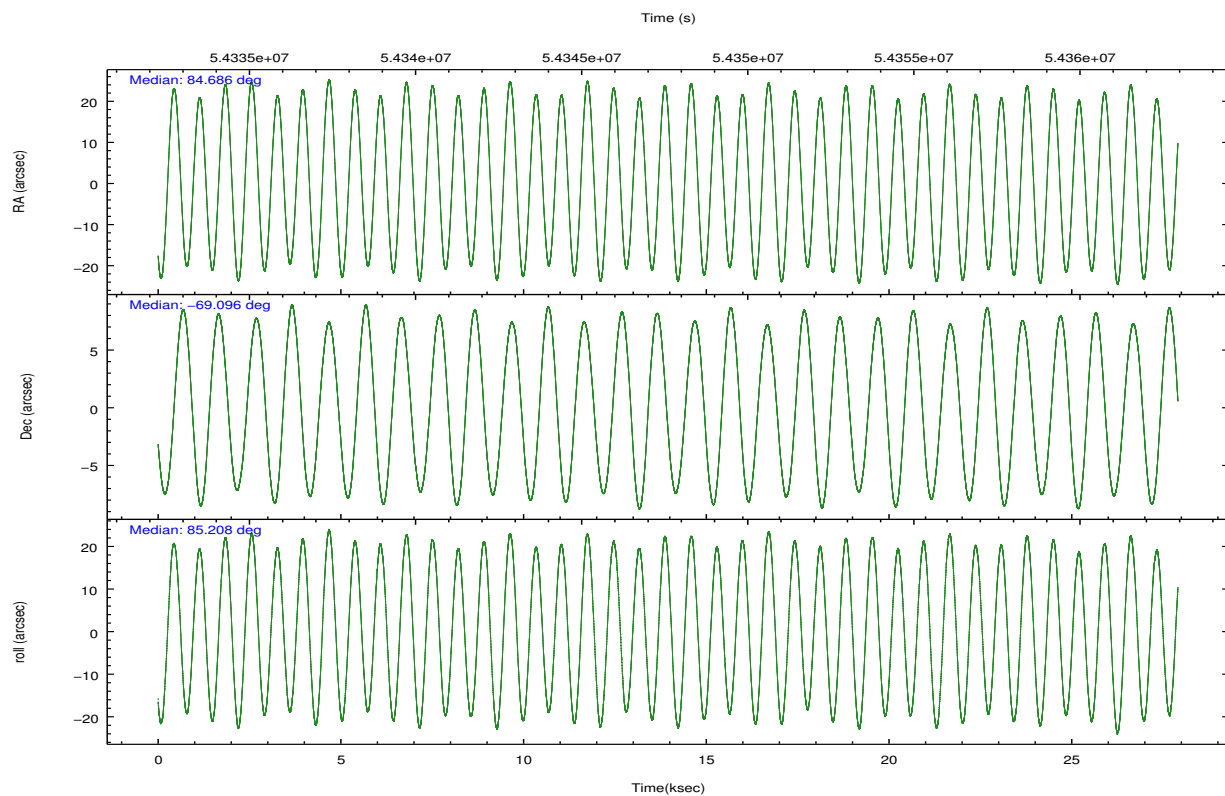
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7	ccd 8
grade 0 events	236	250	226	430	282	318
	2%	2%	1%	3%	2%	2%
grade 1 events	2	2	2	5	6	0
	0%	0%	0%	0%	0%	0%
grade 2 events	225	222	232	262	666	360
	2%	1%	1%	2%	7%	2%
grade 3 events	114	140	113	96	242	152
	1%	1%	0%	0%	2%	1%
grade 4 events	109	129	127	98	232	139
	0%	1%	0%	0%	2%	1%
grade 5 events	202	217	177	217	454	265
	1%	1%	1%	1%	4%	1%
grade 6 events	155	199	128	139	1455	345
	1%	1%	1%	1%	15%	2%
grade 7 events	10046	10631	11771	11523	6089	12178
	90%	90%	92%	90%	64%	88%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-012378	ACIS-012378	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	84.717613	84.68587471326543	Subarray requested	NONE	NONE
Pointing Dec	-69.121451	-69.09606430851815	Alternating exposures requested	Y	Y
Pointing Roll	85.036505	85.21553906315273	Primary exposure time	0.300000	0.3
Roll angle	85.000000	85.000000	Secondary exposure time	3.300000	3.3
Roll tolerance	7.000000	7.000000	Duty cycle	10	10
Roll constraint allows 180D rotation	N	N			
Window start time	53481664.184000	53481664.184000			
Window stop time	58838464.184000	58838464.184000			
SIM focus pos (mm)	-0.782348	-0.7809083437167272			
SIM defocus (mm)	0	0.001439871863259334			
SIM translation stage pos (mm)	-233.592463	-233.5874344608287			
SIM translation stage offset (mm)	0	-0.005018542100998502			
Observation start time	54333715.184000	54333647.089523			
Observation start date	1999-09-21T20:40:51	1999-09-21T20:40:47			
Observation end time	54361555.184000	54361729.01553			
Observation end date	1999-09-22T04:24:51	1999-09-22T04:28:49			
Read mode	TIMED	TIMED			

## 2.3 Aspect



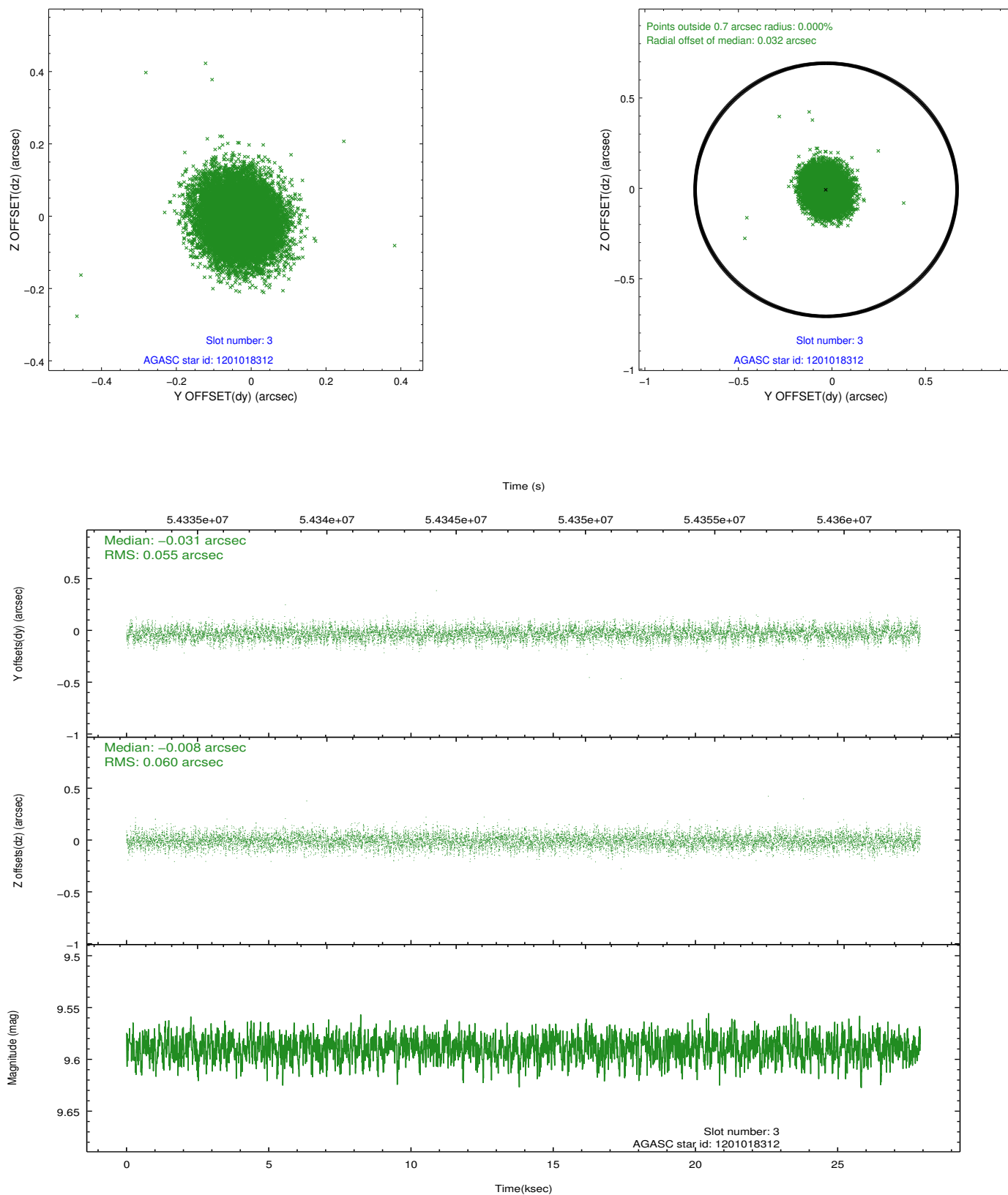


### Slot Statistics

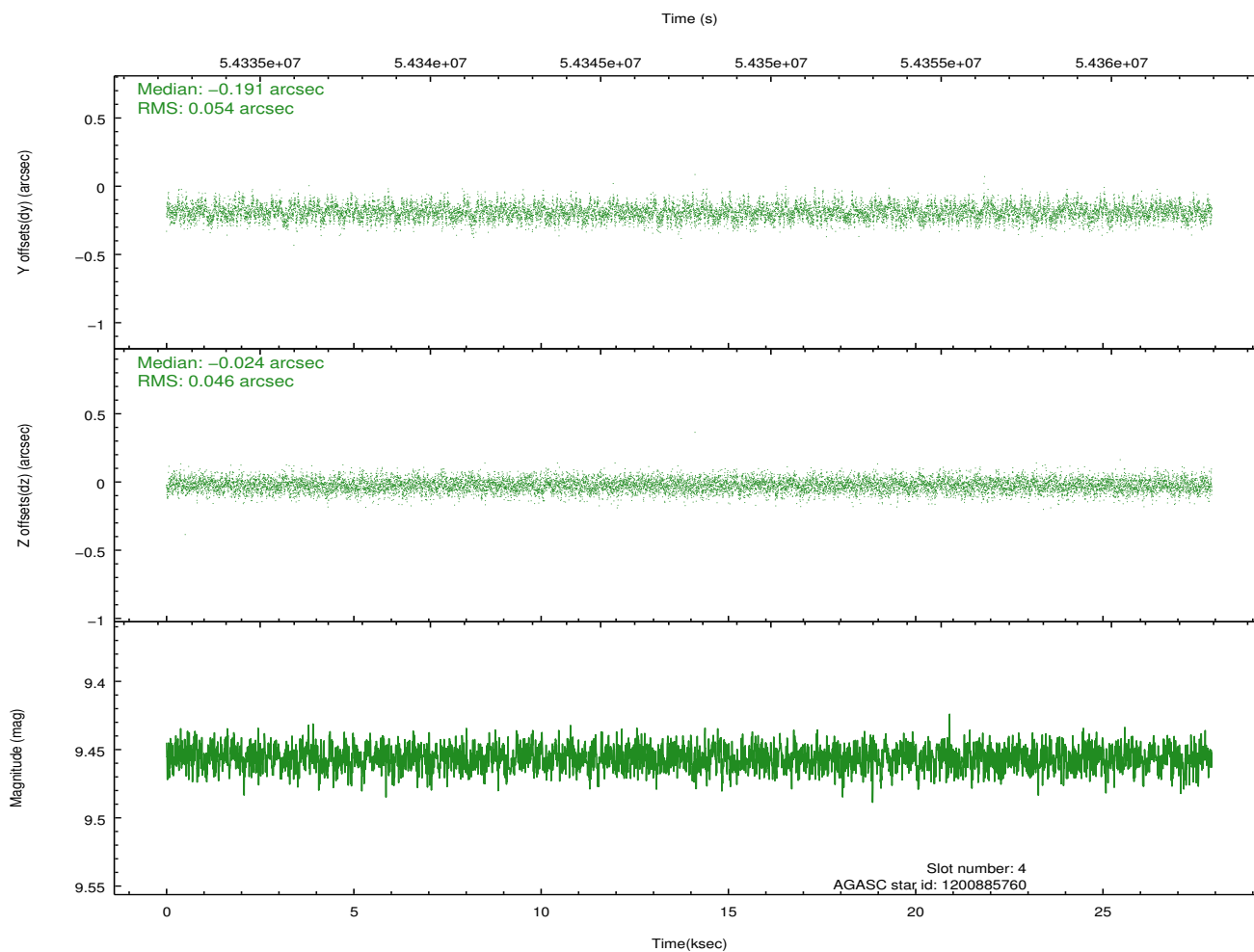
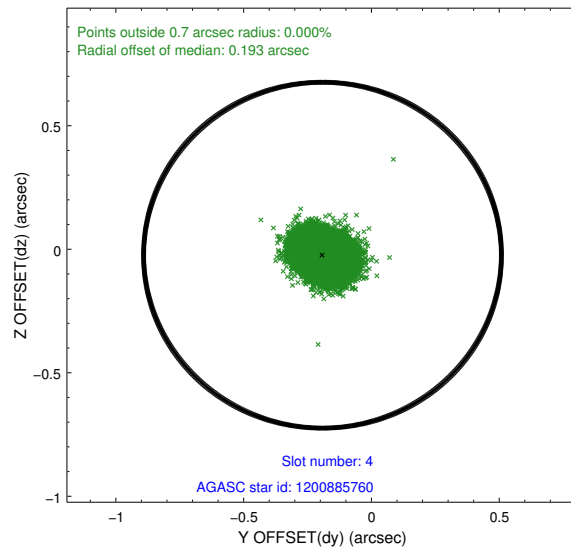
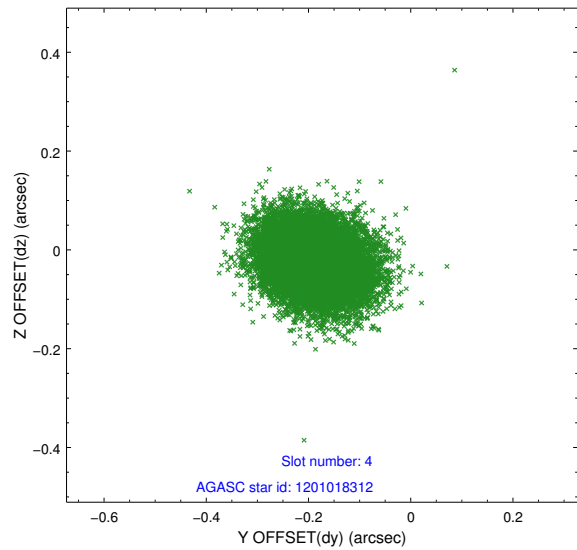
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-3	7.44	13614	0.024	0.085	0.010	0.016	0.000000	0.000000	58.58	-958.16
1	FID	ACIS-I-4	7.22	13614	0.087	-0.036	0.007	0.012	0.000000	0.000000	2161.26	1074.69
2	FID	ACIS-I-5	7.23	13613	-0.210	0.020	0.008	0.013	0.000000	0.000000	-1807.04	1072.72
3	GUIDE	1201018312	9.59	13603	-0.031	-0.008	0.087	0.140	86.298231	-69.115627	171.50	-2021.10
4	GUIDE	1200885760	9.46	13609	-0.191	-0.024	0.076	0.123	83.723637	-68.777667	1111.04	1396.54
5	GUIDE	1201017424	10.20	13600	0.035	-0.025	0.101	0.163	85.854985	-69.248506	-342.34	-1485.97
6	GUIDE	1201020088	10.53	13601	0.019	-0.032	0.148	0.237	86.319248	-68.997756	596.74	-2022.43
7	GUIDE	1200883712	10.97	13533	0.167	0.087	0.183	0.287	82.967832	-68.544140	1839.41	2472.42

## 2.4 Star Slots

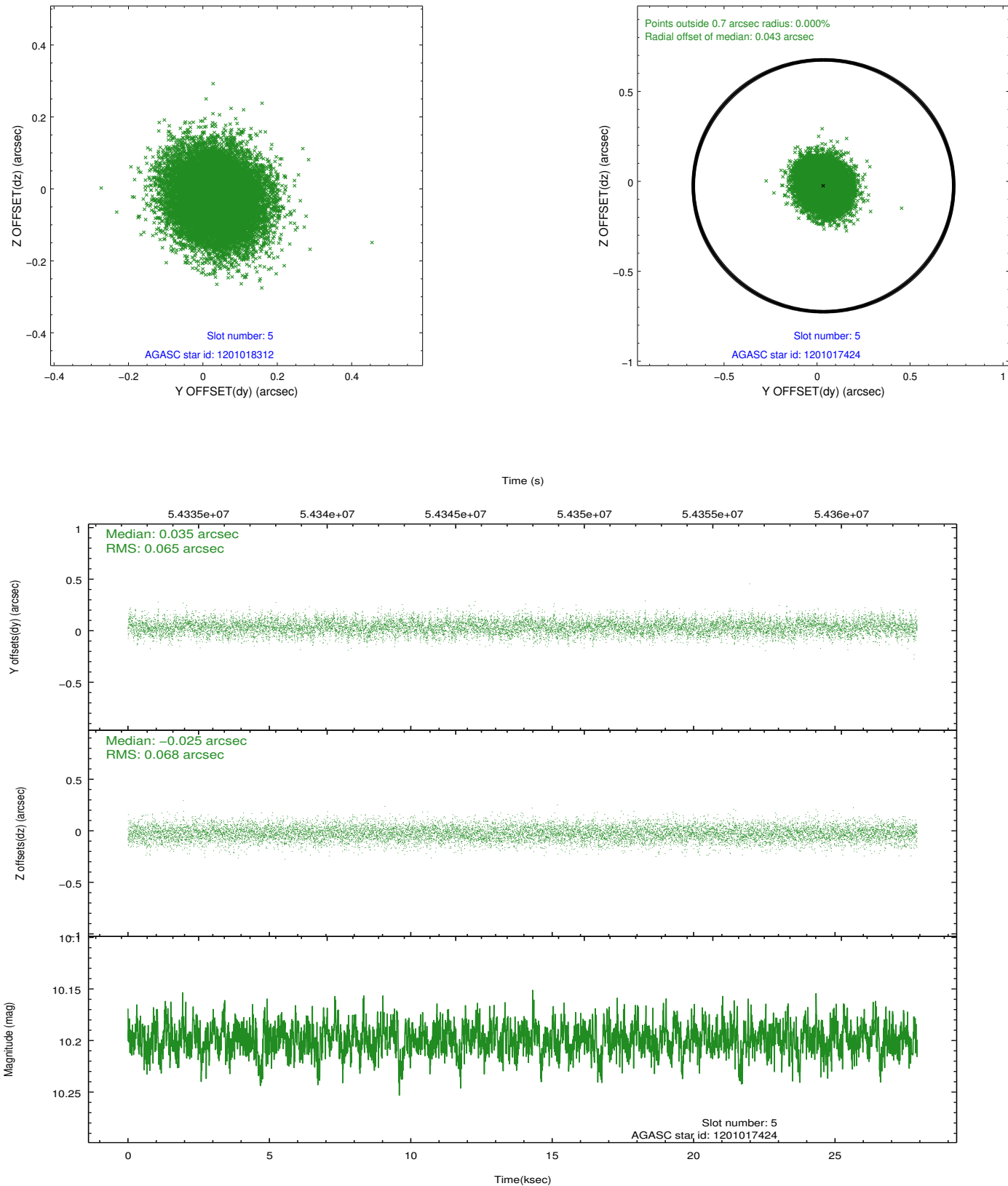
### 2.4.1 Slot 3



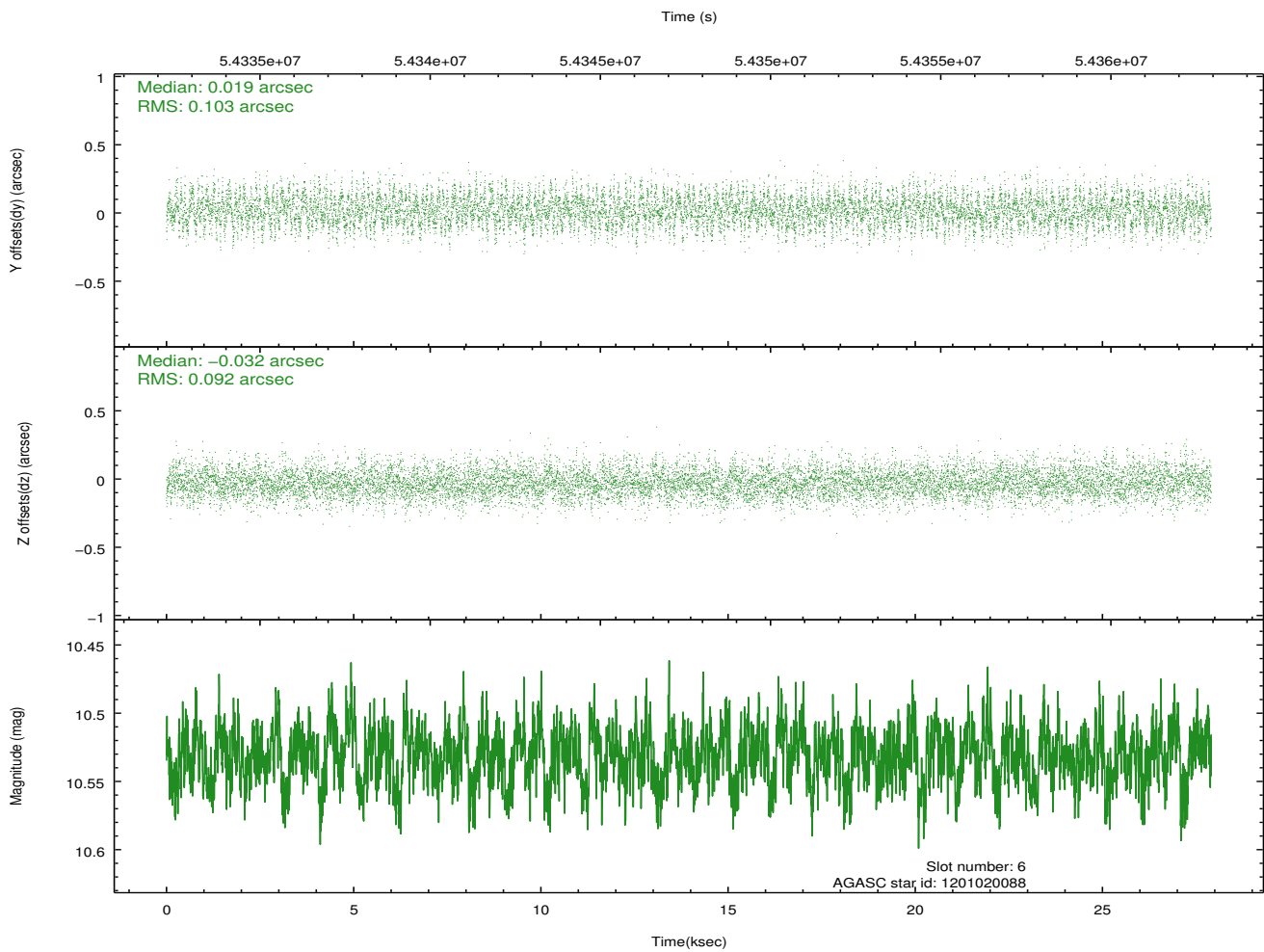
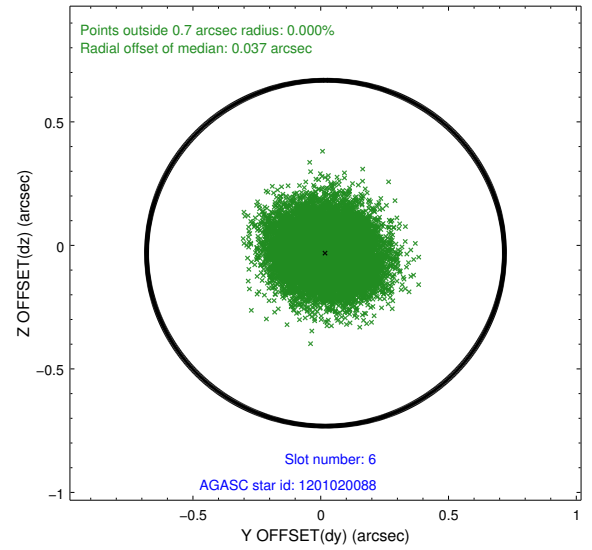
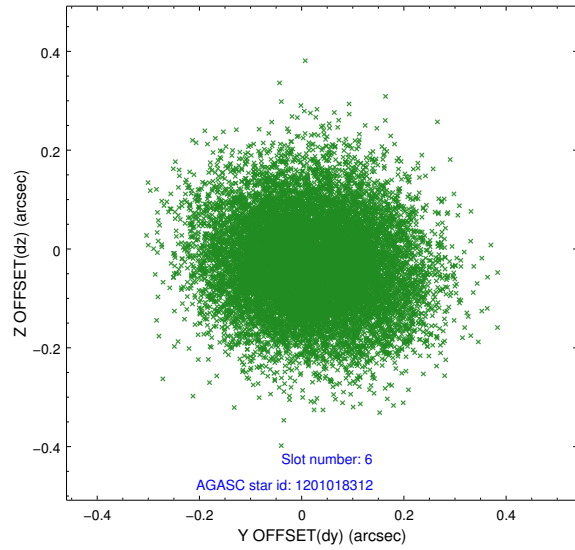
## 2.4.2 Slot 4



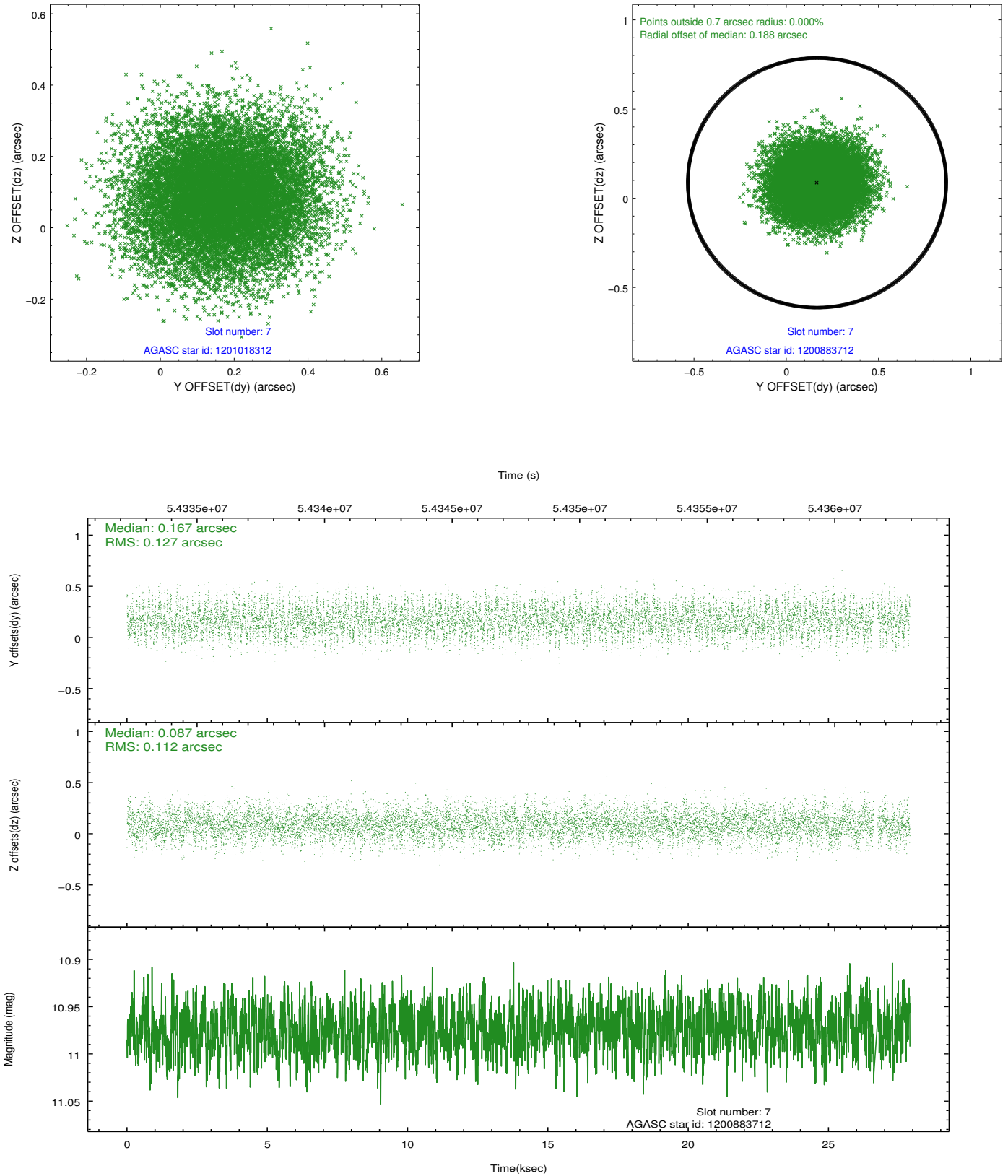
### 2.4.3 Slot 5



## 2.4.4 Slot 6

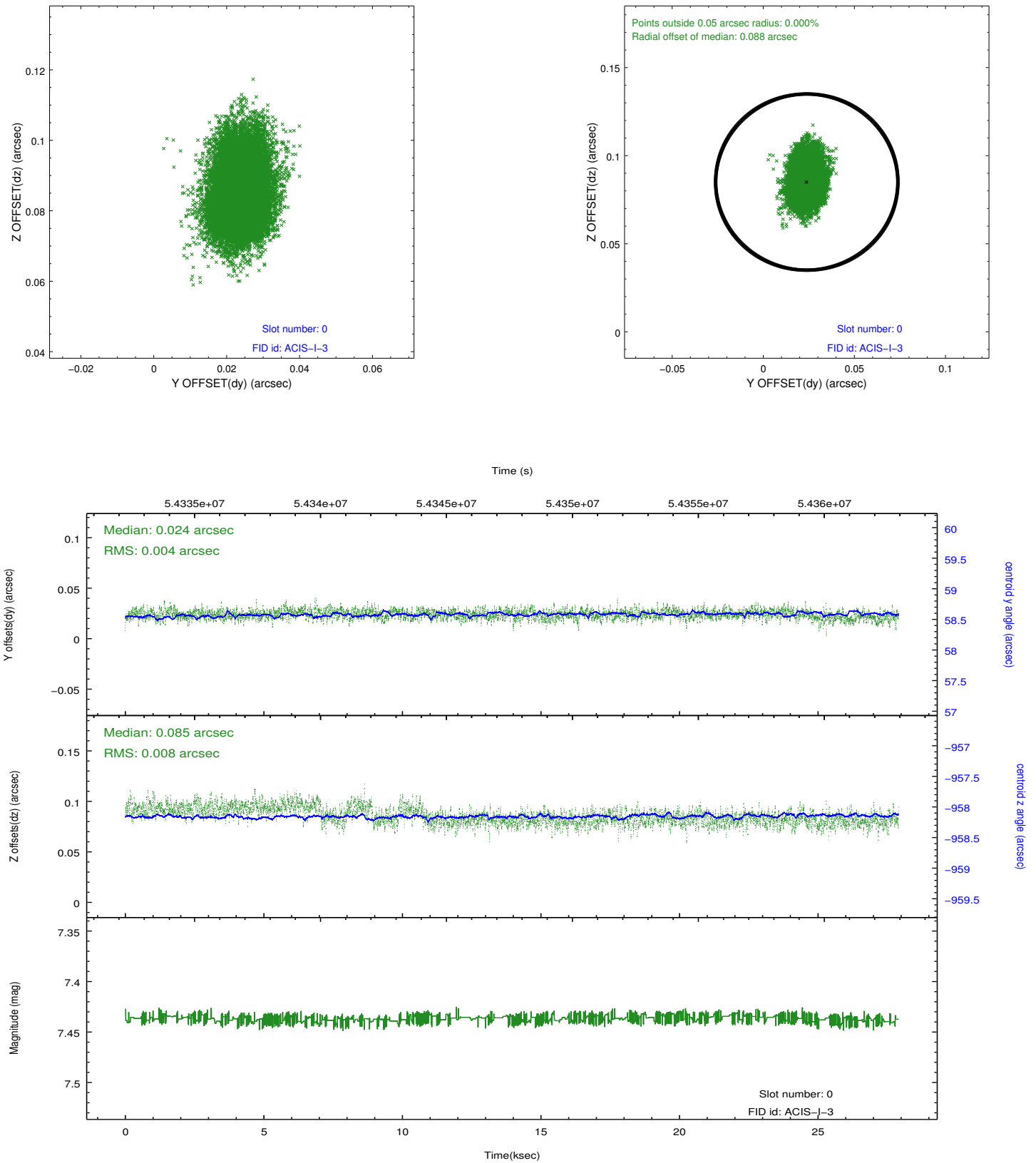


## 2.4.5 Slot 7

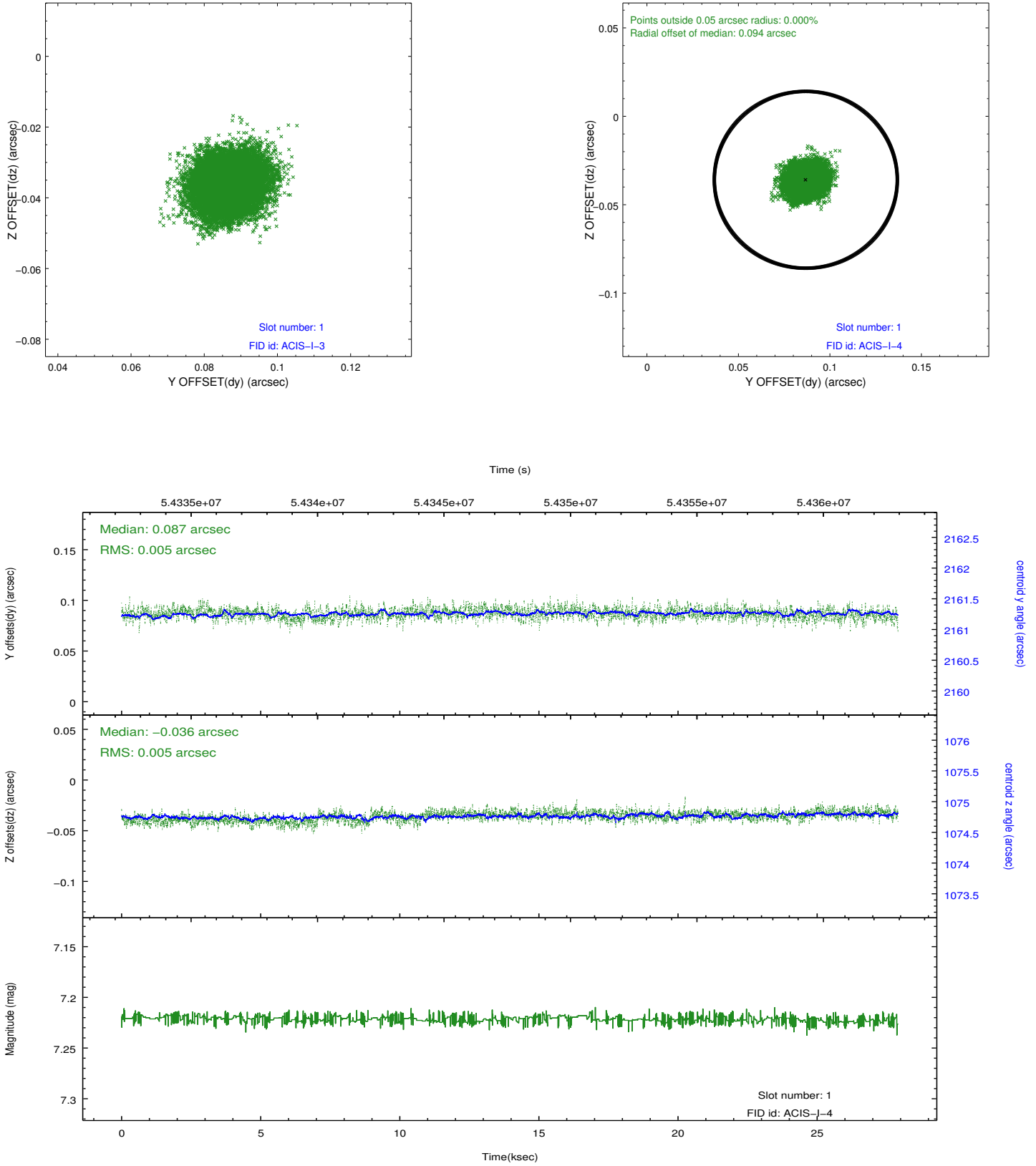


## 2.5 FID Slots

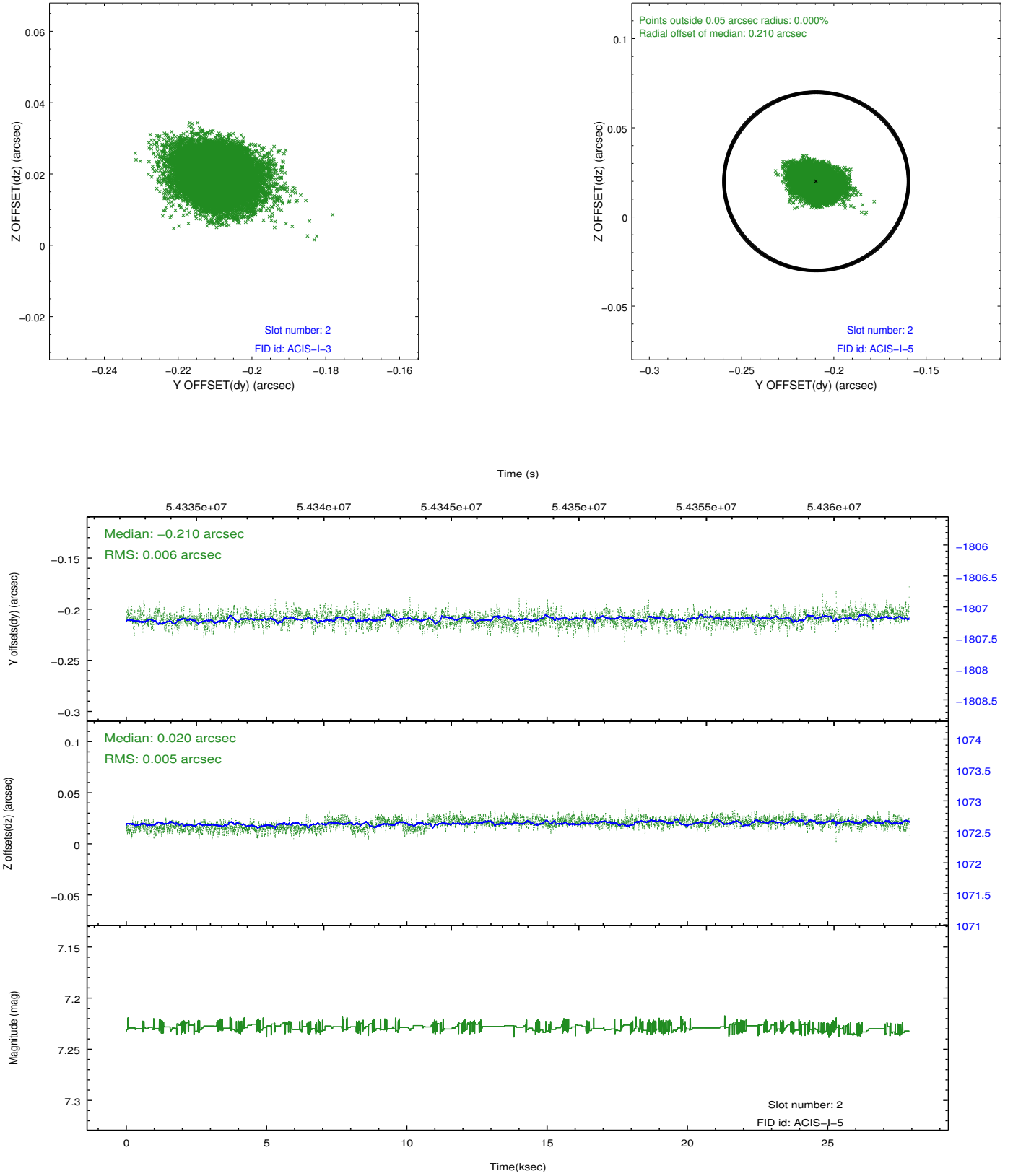
### 2.5.1 Slot 0



## 2.5.2 Slot 1



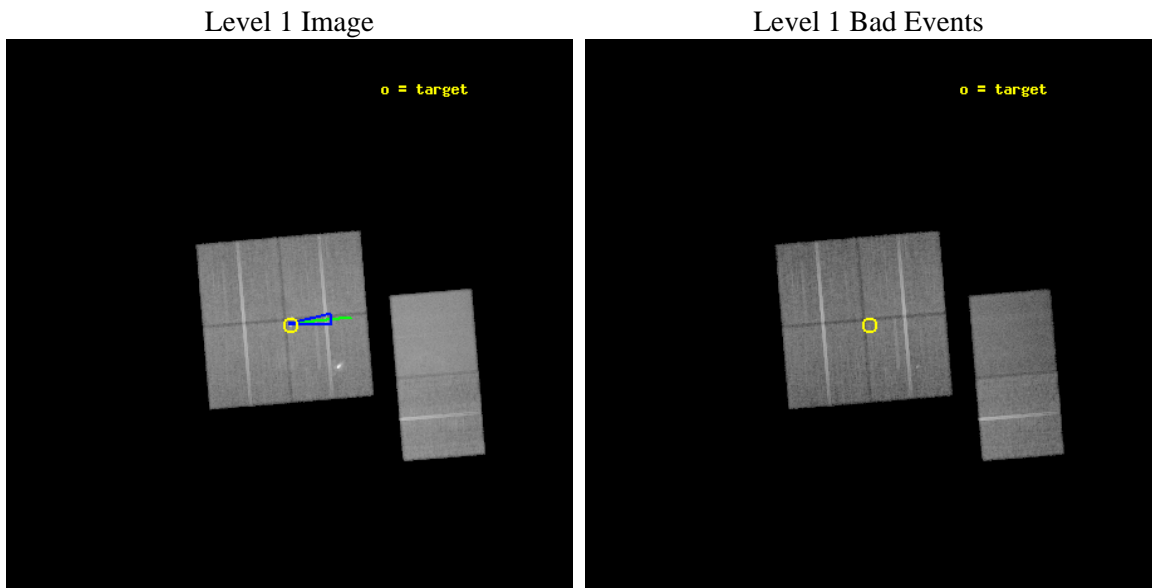
### 2.5.3 Slot 2



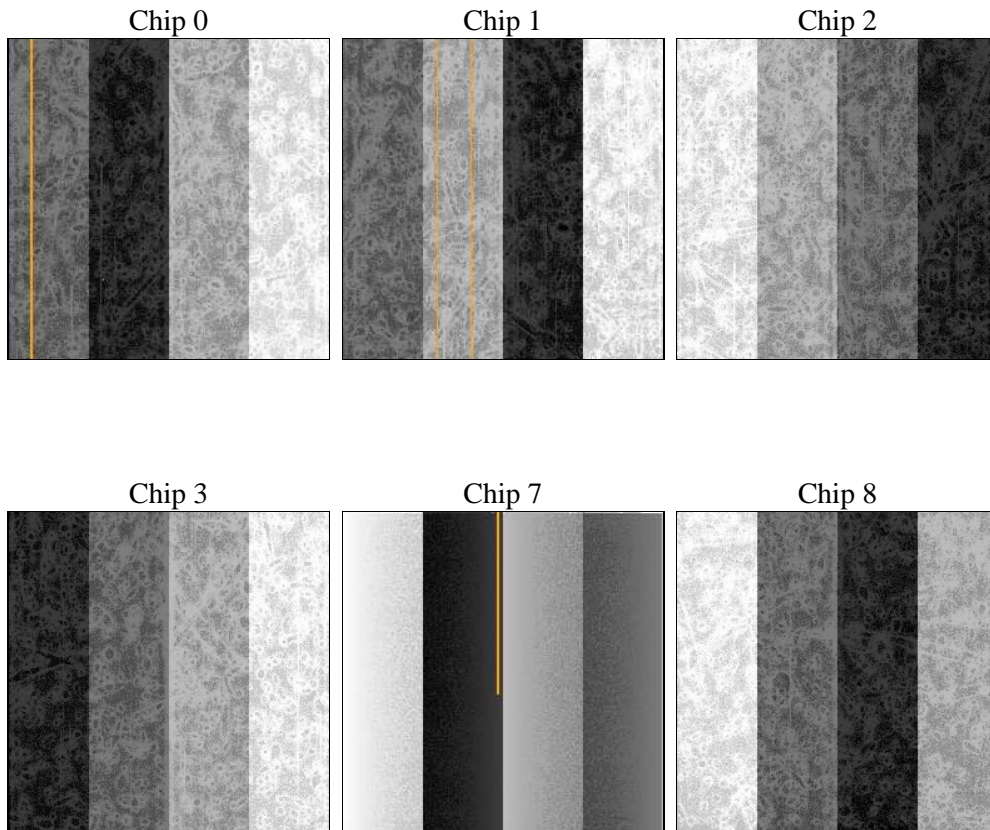
# 3 OBI Secondary

## 3.1 OBI

### 3.1.1 Images



### 3.1.2 Bias



### 3.1.3 Parameters

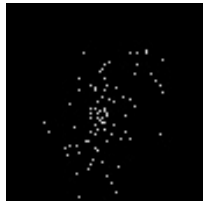
obi_num	0	Obi number	sched_exp_time	27840.000000	Scheduled observation exposure time
ascdsver	8.3.2.1	ASCDS version number	ontime	23059.92985101	Sum of GTIs [s]
caldbver	4.3.1	&#160	ontime0	23084.761926189	Sum of GTIs [s]
date	2010-09-28T09:40:03	Date and time of file creation	ontime1	23110.041910164	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	23009.812495381	Sum of GTIs [s]
			ontime3	23059.92985101	Sum of GTIs [s]
			ontime7	23671.321898967	Sum of GTIs [s]
			ontime8	23240.339667588	Sum of GTIs [s]
			l1events	1539431	Number of level 1 events

### 3.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7	ccd 8		ccd 0	ccd 1	ccd 2	ccd 3	ccd 7	ccd 8
level 1 events	218319	220910	237574	254946	329899	277783	grade 0 events	14013	14910	15046	33075	17726	20086
rejected events	184377	183927	202325	194453	151218	217830		6%	6%	6%	12%	5%	7%
rejected %	84%	83%	85%	76%	45%	78%	grade 1 events	74	83	79	202	155	136
								0%	0%	0%	0%	0%	0%
							grade 2 events	11331	12308	11960	17248	36722	18761
								5%	5%	5%	6%	11%	6%
							grade 3 events	1728	1983	1518	2077	11816	4297
								0%	0%	0%	0%	3%	1%
							grade 4 events	1620	1876	1565	2054	11096	3922
								0%	0%	0%	0%	3%	1%
							grade 5 events	4310	4298	3656	4135	14880	6029
								1%	1%	1%	1%	4%	2%
							grade 6 events	5258	5913	5163	6045	101410	12903
								2%	2%	2%	2%	30%	4%
							grade 7 events	179985	179539	198587	190110	136094	211649
								82%	81%	83%	74%	41%	76%

## 4 Point Sources

6.84 arcmin



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2010.09.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.492

## A.2 Comments

The ACIS focal plane temperature is warmer than -118.7 C degrees during the interval 54335419.04 - 54361485.44 (MET s) of this observation. This temperature is the upper limit of the verified ACIS calibration for the front-illuminated chips. The focal plane temperature is warmer than -116.7 C during the interval 54335419.04 - 54361485.44 (MET s) of this observation. This temperature is the upper limit of the verified ACIS calibration for the back-illuminated chips. The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (e.g., fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.

==

Roll preference met.

Window preference met.